

Nikhil Kumar

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EDUCATION

Netaji Subhash Engineering College, Kolkata	2022 – 2026
<i>B.Tech in Electronics and Communication Engineering (Till 6th Sem)</i>	<i>CGPA: 6.58</i>
Laxmi Narain Dubey (L.N.D.) College, Motihari, Bihar	2021
<i>Class 12th, BSEB Board</i>	<i>Percentage: 75.5%</i>
St. Xavier's High School, Motihari, Bihar	2019
<i>Class 10th, CBSE Board</i>	<i>Percentage: 77.6%</i>

EXPERIENCE

Embedded Systems/IOT Intern	June - July 2025
<i>IC Centre, Jadavpur University</i>	<i>Kolkata, West Bengal</i>
<ul style="list-style-type: none">Designed and developed IoT prototypes using Arduino and ESP32 platforms with real-time sensor data processing in C/C++ and MicroPython.Built a heart rate monitoring system leveraging the Pulse Sensor Amped for precise biometric data acquisition and analysis.Integrated cloud connectivity using MQTT and Blynk, and implemented communication protocols including I2C, SPI, and UART for seamless data transmission.	

PROJECTS

- Smart Temperature & Humidity Monitor** | *C++, Arduino IDE, DHT11 Sensor, LCD Display*
- * Built a microcontroller-based system using Arduino Uno and a DHT11 sensor to measure ambient temperature and humidity.
 - * Programmed sensor data acquisition in C++ and displayed live readings on a 16×2 LCD module.
 - * Implemented threshold-based alerts using a buzzer for abnormal temperature or humidity levels.
 - * Optimized sensor reading intervals to reduce power consumption and ensure stable data output.
- IoT-Based Real-Time Heart Rate Monitoring System** | *C++, Arduino IDE (built-in libraries)*
- * Designed and built a heart rate monitoring system using Arduino Uno R3 and Pulse Sensor Amped for real-time physiological data tracking.
 - * Programmed the microcontroller to acquire and process heart rate signals, enabling serial communication for live data visualization on a local system.
 - * Optimized signal handling for accurate pulse detection and reliable data transmission with minimal latency.

TECHNICAL SKILLS

Languages: C/C++, SQL (PostgreSQL), JavaScript, HTML/CSS
Frameworks: ReactJS, Bootstrap, Tailwind CSS
Developer Tools: Git, GitHub, Docker, Google Cloud Platform, Visual Studio
Relevant Coursework: Data Structures and Algorithms, Object-Oriented Programming, Database Management Systems, Computer Networks
Communication & Thinking: Structured thinking, logical reasoning, articulate writing, professional communication, team collaboration

ACHIEVEMENTS

Problem Solving: Solved 100+ Data Structures and Algorithms problems on platforms including GeeksforGeeks and LeetCode.

Hackathon: Qualified for the Smart India Hackathon (Internal Round) by developing a University Network Portal to facilitate communication and resource sharing among students and faculty.